

## NATURAL GAS: OUR CURRENT SITUATION

While America has abundant domestic natural gas resources, our current supply chain is near the breaking point. Low supply levels are resulting in natural gas prices that are two to three times above the historic average. High prices are hurting our economy, putting additional strain on the current economic recovery. Every economic recession since World War II has followed a period of significant increases in energy costs. Energy is the lifeblood of our economy. When energy prices go up, so do the costs of manufacturing, farming, transportation, and all of the goods and services Americans consume and provide. Higher prices mean that paychecks buy less and families do without. High energy prices are an insidious tax affecting everyone. Our lowest income citizens are hurt the most. They have to make unthinkable choices – like going without necessities such as food, medicine, heat and clothing.

Because domestically produced natural gas is so vital to our nation's energy balance, rising prices make our nation less competitive. When prices rise, factories close. Good, high paying jobs are imported overseas. Today's high natural gas prices are doing just that. We are losing manufacturing jobs in the chemicals, plastics, steel, automotive, glass, fertilizer, fabrication, textile, pharmaceutical, agribusiness and high tech industries. The industrial and electric sectors are huge consumers of natural gas in the U.S., and more than 40 percent of our natural gas supply is used in the industrial sector for a variety of uses

including space heating, steam generation, and electricity generation. These uses support hundreds of thousands of jobs.

Chemical Manufacturing and Industrial Use:

Natural gas is a critical building block for many products, including specialty chemicals like ammonia-based fertilizers. As a direct result of skyrocketing gas prices, our domestic fertilizer industry is becoming uncompetitive with foreign producers. Since mid-2000, when the natural gas shortage began, eleven ammonia plants representing 21 percent of U.S. capacity have been forced to close. The remaining industry has operated at levels approaching 50 percent of capacity. Workers have been laid off because of plant closings. More permanent closings are inevitable if prices remain high, increasing the dependence of the U.S. farmer and industrial consumer on foreign sources. The destruction of the American fertilizer industry hurts the American farmer. In the past year, fertilizer prices have more than doubled. This is shrinking profit margins for agricultural products, increasing the cost of food on the table and putting additional pressure on the already endangered family farm, farm states, and the agricultural sector of the economy.

Since the 1980s, industrial use of natural gas has soared with consumption increasing by 2.5 trillion cubic feet. This is the largest demand growth area for natural gas over the period. Outside of chemical manufacturing, industrial uses for natural gas include the use of needed heat and electricity through a process known as co-generation. This process enables industrial facilities to use modern equipment to produce, capture and utilize energy and

heat that would otherwise be wasted. Industrial facilities through the use of natural gas for cogeneration are increasing their overall efficiency and competitiveness. But high natural gas prices threaten to reverse this trend, making them less competitive and more likely to relocate abroad.

#### Electrical Generation:

Because natural gas is clean-burning, domestically available, traditionally affordable and abundant in North America, it has been a highly desirable fuel for electrical generation since the mid-1980s. In fact, public policy has promoted increased use of natural gas for power generation for over a decade. As a result, over 90 percent of proposed new power plants plan to use natural gas. But current supplies and prices will likely delay or put an end to many of these planned power plants. At current prices, most of these plants would not be competitive in a deregulated power market. This is a critical turn of events. America's power generation and transmission system is severely antiquated, due to a number of factors, including government policy initiatives that are at odds with one another.

#### Commercial Use of Natural Gas:

A wide range of commercial facilities such as supermarkets, retailers, restaurants, malls, hotels, computer data centers, health care facilities, and schools use natural gas for space-heating, lighting, water-heating, cooling, dehumidification, and cooking. Natural gas accounts for more than 40 percent of commercial energy consumption. This sector consumes about 7.7 trillion cubic feet of natural gas per year and is expected to increase its use by 25 percent by

the year 2020. However, to sustain this growth rate, affordable, domestically produced natural gas must be available at a reasonable cost.

Energy is often the second largest cost for American businesses, just behind labor. Increases in energy costs, like the doubling or tripling we have seen in natural gas costs, have a severe negative impact on profitability – especially on small businesses which employ the majority of the U.S. workforce. High gas prices are crippling the commercial sector of the economy just when the economy is poised to grow. Continued high natural gas and energy costs will force more businesses into bankruptcy and Americans out of jobs.

#### Residential Use:

More than 56 million homes, or 55 percent of all U.S. households use natural gas, a figure that has accelerated in recent years. Today, over 70 percent of new homes built in the U.S. use natural gas. American families depend on natural gas to heat and cool their homes, cook their food, dry their clothes and warm their water. Recent spikes in natural gas prices are taking their toll on American families. While consumers faced bill shock last winter when prices rose, they were not exposed to the full brunt of gas prices in their gas and electricity bills. This winter, after adjustments are made by utility companies to make rates reflect the present cost of natural gas, home heating and electric bills will increase further, especially if we have a cold winter which draws down natural gas storage. While some seek to blame the local distribution companies, their costs of natural gas are passed on to the consumer with no added fees whatsoever.

Energy costs have a direct impact on family budgets. High energy prices mean less money for other needs such as food, rent, clothes, school tuition, medicine, vacations, entertainment, charitable contributions and basic quality of life. It also means less money flowing into the economy which hurts all Americans. Low income families and the elderly are the hardest hit by rising natural gas costs. Because their budgets are smaller, any increase in the cost of energy forces them to make larger sacrifices by denying themselves other basic necessities like food, medicine and clothing. While there are programs at the state and federal levels to provide financial relief to low-income families, money is not the answer if the fuel cannot be obtained because of lack of supply.

Access to America's Abundant Gas Resources:

While the U.S. is currently suffering from a shortage of gas supply, natural gas resources in the U.S. are plentiful. In fact, recent studies estimate that the total technically recoverable North American natural gas resource is sufficient to meet our current demand needs for many generations. Unfortunately, government policies are preventing us from being able to produce and use that gas.

Much of the natural gas located on private lands in states like Texas, Oklahoma, and Louisiana has already been produced. After decades of use, those regions are now in production decline. Over 60 percent of our nation's future natural gas reserves lie beneath lands such as the Intermountain West and Alaska, and offshore waters that are controlled by the government. These vast resources, on non-park federal lands and beneath offshore waters, offer

years of supply for American consumers and the economy. But government policies are making it increasingly difficult, if not impossible, to access these promising reserves.

Numerous overlapping environmental regulations are preventing or slowing access to natural gas resources on federal lands. In order to obtain the right to drill for oil or gas on federal lands or in federal waters, a lease must be obtained from a federal agency. Before a lease is issued, environmental reviews must be performed to determine if energy development activities on that land can be done without adversely affecting the multiple uses for which federal lands are maintained and without negatively impacting the environment.

In recent years, a number of administrative land use decisions have reduced the amount of land available for leasing. Additionally, numerous lawsuits filed by opposition groups from the environmental community and locals fearful of industry near their neighborhoods have attempted to block leasing on those lands deemed by land use agencies to be suitable for natural gas or oil development. These lawsuits can tie up a project for months or years and significantly increase the cost of the development of federal energy resources. Those costs and time delays often stop energy projects dead in their tracks and help decrease the supply and increase the cost of natural gas to the consumer.

Finally, bureaucratic red tape has slowed down the amount of time that it takes to receive a lease for energy production in many areas of the country. It can actually take years for an energy company to receive a lease. In today's natural gas supply/demand balance, this time means less gas to meet demand,

resulting in higher prices and potential shortages of supply at critical times of the heating season when demand is high.

Once an applicant receives a lease, he must apply for a permit to access natural gas and oil. In order to receive that permit, environmental reviews are often necessary. However, federal agencies are increasingly experiencing long delays in performing necessary reviews and completing the paperwork needed to approve applications. In fact, the average time that it takes the Bureau of Land Management to approve an oil and gas application to drill has increased from 30 days to 175 days. These long and costly delays for reviews and applications are slowing down oil and gas development on federal lands at a time when we need the resource the most.

Development of our natural gas resources is also thwarted by land withdrawals and moratoria on oil and gas development. Federal land grabs during the 1990s took millions of acres of land, long intended for multiple public uses, and made them unavailable for oil and gas leasing. Additionally, Congress and the Executive Branch have put 85 percent of the Outer Continental Shelf surrounding the lower 48 states off-limits to natural gas and oil development. These areas have trillions of cubic feet of recoverable natural gas that could be used to warm American homes and fuel our economy.

Efforts to develop natural gas reserves on public lands are increasingly highly polarized and fraught with uncertainty, litigation, and delay. Thousands of frivolous lawsuits, bureaucratic red-tape, and political mismanagement are locking up these resources and keeping them from the American consumer. As

a result, existing supplies are dwindling at the same time that demand for this clean-burning fuel is rising.

#### Technology and Responsible Development:

While groups opposed to natural gas development usually attempt to block production in the name of environmental protection, modern gas production has very little, if any, negative impact on the environment. In recent years, technological advances, such as three and four dimensional seismic imaging (the geologic equivalent of an x-ray, performed with sound waves), have greatly enhanced the ability to find and produce natural gas, and to produce the maximum amount possible from a given location. Technological advances, such as directional and extended reach drilling, have also reduced the temporary surface disturbance needed to explore and produce natural gas, reducing or even eliminating any disruption to the ecosystems or habitats in the areas of production. These technologies enable a single, small drilling pad to access multiple gas reservoirs as far as four miles away in any direction and at depths thousands of feet below the Earth's surface.

Improvements in remediation techniques have also minimized the environmental footprint from natural gas development. After exploration and production is completed, these techniques are routinely applied and, within months, there is virtually no physical evidence of development remaining.

A 1999 Clinton Administration report, *Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology*, states that innovative natural gas exploration and production approaches are “making a difference to



the environment” because experts can produce energy more efficiently and “restore sites to original or *better* condition.” It points out that, over the last four decades, industry has developed increasingly innovative technologies that increase environmental performance and economic performance and resource recovery. It states that increased natural gas use is environmentally desirable and that there are increasingly higher estimates of the “cleaner choice” natural gas resources in the United States because of “major advances” in natural gas technology.

Developing our natural gas resources in an environmentally sound manner is a bi-partisan effort, one that both Republican and Democratic administrations have realized are not only possible, but necessary for our energy security and economic expansion. We need to develop sound public policies that recognize the realities of modern energy production techniques and their impacts on the environment. We need to take a rational approach to find solutions to our energy needs and avoid emotionally charged discourse that provide no solutions for the energy needs of the American people. The United States is the recognized world leader in technology – from computers, to aerospace, to medicine to nanotechnology. We are already applying our technology and know-how. We are a “can do” nation and we can and will apply this attitude and know-how to meet our energy needs without harming our environment.

#### Liquefied Natural Gas (LNG):

LNG supplies approximately one percent of our nation’s demand for natural gas. LNG is essentially natural gas in its liquid state at a temperature of –

260 degrees Fahrenheit. There are currently four LNG import terminals in the United States: Everett, Massachusetts; Cove Point, Maryland; Elba Island, Georgia; and Lake Charles, Louisiana. There are several planned LNG import terminals in various stages of development, with the highest concentrations being along the Gulf coast and West coast.

LNG import terminals require extensive capital investment to build and require a host of permits and licenses from an array of governmental agencies. Legal challenges to the siting of an LNG terminal are inevitable, thus prolonging increased LNG supplies to the United States in any time frame that could be considered less than long term.

Summary:

Despite mountains of evidence to the contrary, radical environmentalists continue to bang the same old drum that we can't produce energy and still protect our environment. In reality, these two important goals are not mutually exclusive. New technologies allow us to produce energy smarter and more efficiently, and we already have laws on the books that include the most restrictive environmental protections of any nation on earth. Irrespective of these facts, government red tape is causing a worsening natural gas shortage, even though there is no lack of natural gas in America. There is, however, a shortage of natural gas for sale on the energy market because government policies restrict access to the most promising areas with the greatest potential natural gas resources. There is also a shortage of common sense that is preventing us from developing rational government policies that will enable us to get access our

natural gas resources and deliver them to the American people and our economy.

#### ALTERNATIVES TO NATURAL GAS:

##### Nuclear power:

In addition to natural gas, other sources of energy must be developed in order to provide Americans with the security of a diverse supply of energy. Nuclear power is one such energy source. However, environmental hysteria over nuclear power plants has shut down much of the potential for future production from those facilities in the U.S. While nuclear power is affordable and environmentally sound, producing virtually no emissions, it is almost impossible to get a new plant permitted. Lawsuits, most of which are initiated by opposition groups from the environmental community and locals fearful of industry near their neighborhoods, have stopped this option for clean domestic energy. America has abundant uranium resources that can be used to fuel existing and new nuclear power facilities. We also have the technology to do it in a safe and environmentally responsible manner. We need public policies that allow us to use this resource for our future.

##### Coal:

An abundant and readily available source of energy is coal. The majority of America's electricity production, just over 50 percent, comes from coal-fired generation. America has vast coal resources – enough to supply America's energy needs for at least 150 years. Some estimates have put America's coal reserves as high as 500 years. At the same time, coal provides us with some of

the cheapest electricity available anywhere on Earth. While the domestic resource is abundant and the cost of coal-fired power is very low, public policies have discouraged the use of coal for electricity generation. This policy has been initiated because of concerns over air pollution in the form of sulfur dioxide, oxides of nitrogen and fine particles. As a result, there are no new planned coal-fired facilities being considered. And it is becoming increasingly difficult to keep existing plants operating due to some of the world's most stringent environmental regulations.

While coal does face environmental challenges, new technology is enabling the production of electricity from coal with significantly reduced air emissions. Public policies should strike a balance that will enable us to keep existing coal-fired generation on-line and affordable and expand the use of coal for our electricity needs, while continuing to make significant strides in developing and implementing state-of-the-art technologies that significantly reduce the emissions from coal-fired plants. Over 40 percent of the coal produced in the U.S. today comes from federal lands, primarily in the Intermountain West. In fact, the state of Wyoming is often referred to as the Saudi Arabia of coal. Large quantities also exist close to markets in the Eastern United States, and the jobs created are important to the economies of rural States in the eastern coal belt. Public policies are increasingly discouraging the production of coal, natural gas, and other resources on federal lands in the West. We need sound public policies that encourage the continued responsible production of coal resources in all parts of the country to ensure continued use of these abundant resources.

### Renewable energy:

America also has significant resources for renewable energy production. Wind, solar, geothermal, hydropower, biomass, wave and tidal resources all have the potential to make significant contributions to our energy needs in the future, and some sources, such as hydropower, geothermal and wind, are already making increasingly significant contributions to our energy needs. But it is important to note that these alternatives such as wind and geothermal are currently only contributing about one percent of the total electricity consumed in America. The reason for this small contribution is that many of these resources are not economically viable in today's energy markets using today's technologies. A sound energy policy should encourage the development of renewables by encouraging the development of technological advancements in renewable power production, while at the same time realizing that we need to also encourage the use of existing forms of domestic energy.

America needs to utilize all of its available resources now and in the future to fuel the engines of growth for ourselves and our children.

### Economic Incentives for Natural Gas Development:

In addition to needing sound policies to access natural gas resources, we need sound policies to encourage natural gas exploration and production in frontier areas – those areas that are difficult to access due to technological challenges or harsh conditions. Such areas include offshore deepwater and ultra-deep water, gas at deep and ultra-deep depths in shallow waters on the Outer Continental Shelf, and Frontier Areas offshore Alaska. A way to encourage

production in those areas is to provide gas producers temporary royalty relief on the value of production that producers must pay the government when they produce in federal lands and waters. Deepwater production includes natural gas in depths of greater than 200 meters of water. In 1995, Congress passed the Deepwater Royalty Relief Act, which gave energy producers relief from royalties, up to a certain amount of production, in the deep and ultra deep waters of the Gulf of Mexico. The relief encouraged oil and gas production in these frontier areas, increased American oil and gas production, created jobs and brought additional money to the federal treasury. Any relief granted lessees is being paid by oil production in areas that would not have been developed without such relief.

Significant gas resources also exist in shallow waters in the Gulf of Mexico, but at depths of 15,000 feet or greater below the ocean floor. Deep gas in these shallower waters could make a significant contribution to our overall gas supply in a relatively short period of time since they exist near existing leases and very little new offshore pipeline infrastructure would have to be built in order to get this gas to market. But these deep reservoirs would require huge capital investments, around \$30 million per well. In order to encourage production in these areas, policies are needed to provide royalty relief to producers willing to risk the capital to develop these deep reservoirs.

Marginal natural gas wells, those that produce less than 60 thousand cubic feet per day, currently make an enormous contribution to America's domestic natural gas supply. While they produce very small amounts individually,

collectively they produce about 10 percent of total onshore gas production in the lower 48 states. During periods of low commodity prices these wells can become uneconomic to operate and they are often shut in permanently. Wise federal policy would encourage tax incentives for natural gas production from marginal wells and royalty incentives for those wells existing on Federal lands during periods of low commodity prices.

#### HISTORY OF NATURAL GAS:

Natural gas is a fossil fuel found in sedimentary rock, such as shale, sandstone, dolomite, or limestone formations. Porous rocks collect natural gas and oil in the gaps that exist in the rock formations, creating “pools” of oil and natural gas. Oil and natural gas is trapped in these porous formations by layers of impermeable, nonporous rock such as silt or clay.

By using various technologies, such as seismic, aerial, magnetic, and other surveys, geologists are able to locate potential natural gas bearing formations located deep below the surface. In order to produce the natural gas, or bring it to the surface, a well must be drilled into the earth’s subsurface strata. Today’s technologies provide ways to explore and produce natural gas in such a way as to minimize, if not totally remove, any environmental disruptions. Additionally, natural gas is an environmentally clean burning fuel, and thus the fuel of choice to meet the many stringent requirements of environmental laws and regulations imposed upon industries by the government.

The Energy Information Administration of the United States Department of Energy (EIA) defines the term “natural gas” as a gaseous mixture of hydrocarbon

compounds, the primary one being methane. The Energy Information Administration acknowledges the distinction between “wet natural gas” and “dry natural gas”, which is produced from wet natural gas. Wet natural gas is defined by the EIA as follows:

A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in porous rock formations at reservoir conditions. The principal hydrocarbons normally contained in the mixture are methane, ethane, propane, butane, and pentane. Typical nonhydrocarbon gases that may be present in reservoir natural gas are water vapor, carbon dioxide, hydrogen sulfide, nitrogen and trace amounts of helium. Under reservoir conditions, natural gas and its associated liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil and are not distinguishable at the time as separate substances.

Dry natural gas is defined by the EIA as follows:

Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.



While the term “natural gas” can be very complicated to understand given its components and various definitions, suffice it to say that natural gas is used by America’s families, businesses, farmers, and manufacturers to keep our economy running.

Over one-half of U.S. homes are heated by natural gas. Sixteen percent (16%) of America’s electric generation is fueled by natural gas, with over 90% of new electric generating power plants being fired by natural gas. Natural gas is used in the process of manufacturing such everyday items as plastic, medicines, photographic film, and paints. Industries depend upon natural gas to produce steel, electricity, glass, paper, clothing, aluminum, and brick, just to name a few. Farmers rely upon natural gas to produce fertilizer needed to raise crops that feed the world. In fact, the fertilizer industry relies on natural gas for 97% of its energy use.

As we realize the importance of natural gas in the 21<sup>st</sup> century world, a brief history will highlight its development in the marketplace. The emergence of natural gas into everyday use is difficult to trace. However, there is evidence that the Chinese as early as 200 B.C. used natural gas to make salt from brine in gas-fired evaporators. The natural gas was produced with crude percussion rigs boring shallow wells into the earth and moving the gas via bamboo pipes. In the 19<sup>th</sup> century, natural gas was used as a lighting fuel in Europe and North America.

According to the Natural Gas Supply Association, “On August 27, 1859, Colonel Edwin Drake struck natural gas 69 feet below the surface of the ground

in Titusville, Pennsylvania. The discovery spawned what was to become the first gas transportation pipeline in the United States. A two inch diameter pipe ran five and one half miles, from the well to the village. Most members of the natural gas industry mark this date as the beginning of the industry here in the U.S.” Since that discovery, natural gas has been used to provide street lighting in the 19<sup>th</sup> century, and through developments in pipe technology in the late 1920’s and 1930’s and the development of a large transportation network in the years following, natural gas became used for a variety of processes in the residential, industrial, and electric utility markets. The American Petroleum Institute provides a succinct history of natural gas development in the United States: “Throughout the 19th century, natural gas, mainly extracted from coal, was used exclusively for lighting. The streets of Baltimore were the first to be illuminated by gas lamps in 1816. When electric lights made the gas lanterns obsolete, entrepreneurs looked for other purposes, leading to natural gas-fueled stoves and furnaces. Not until after World War II were the sophisticated pipeline networks built that permitted the use of natural gas on a massive scale. Gas became easy to obtain at a reasonable cost and today, natural gas meets about one quarter of the nation's energy needs.”

Today, consumers in the United States use approximately 62 billion cubic feet per day of natural gas, with nearly all of it produced in North America. The United States produces approximately 84% of its consumption, with 15% being imported from Canada. The remaining 1% is imported from various foreign countries in the form of liquefied natural gas, referred to as LNG. Forty-one

(41%) percent of the natural gas used in this country is by the industrial sector, which includes manufacturing, thus creating jobs and making products to sustain the lifestyles of all Americans. Twenty-three (23%) percent of natural gas consumed is for residential use. In fact, approximately 60 million families use natural gas to heat their homes, representing over one-half the homes in the United States. The balance is divided among the electric power generation sector, commercial use, and as pipeline and plant fuel.

#### HISTORY OF NATURAL GAS REGULATION/DEREGULATION:

In 1938, Congress passed the Natural Gas Act, extending the jurisdiction of the Federal Power Commission to wholesale sales and transportation of natural gas by interstate pipelines. In 1977, the Federal Power Commission was abolished by Congress and the Federal Energy Regulatory Commission (FERC) took its place with the passage of the Department of Energy Reorganization Act.

In the 1970s, our nation experienced severe supply disruptions because governmental price controls destroyed incentives to find more supply. Out of this crisis, the government imposed limits on the uses of natural gas, which were later repealed.

In the mid 1980s, the Federal Energy Regulatory Commission issued orders designed to deregulate the transportation of natural gas through interstate pipelines by encouraging them to offer open access, non-discriminatory transportation services so that end users could contract directly with producers for gas supply. Congress followed suit by enacting the Natural Gas Wellhead

Decontrol Act in 1989, which provided for a gradual elimination of FERC regulation of producer sales of natural gas, eventually leading to complete decontrol in 1993. In 1992, FERC issued its historic order 636, which required interstate pipelines to “unbundled” their sales services from their transportation services and to provide for open access transportation service on an equal basis to all that desired to use pipeline capacity to ship natural gas, regardless of the shipper selected.

#### APPLICATION FOR PERMIT TO DRILL PROCESS ON FEDERAL LANDS:

Throughout the country at field meetings held during the month of August, 2003, the Task Force heard from people about the incredible difficulties obtaining permits on public lands that are technically open for oil and gas activities. This section describes the process for obtaining approval for an application for permit to drill.

In order for a person to drill an oil and gas well on Federal public lands (lands managed by either the Bureau of Land Management or the Forest Service), several mind-numbing procedures must be successfully completed. The process outlined below does not include the innumerable procedures to complete ancillary Federal regulatory requirements such as environmental reviews, determinations as to endangered species, or determinations as to whether the tracts under consideration for leasing are historical sites. Furthermore, the leasing and permitting process described below only sets forth the main process, not the many underlying procedures that must be completed in order for the main process to continue.

In order for a person to lease a tract of land from either the Bureau of Land Management or the Forest Service, the person must determine if the particular tract of land is available for oil and gas leasing. Several questions must be answered before deciding that a particular tract of land is available for leasing: Is the land designated as a Wilderness or Wilderness Study Area? If so, the land cannot be leased for oil and gas exploration and production. Is the land closed to leasing based upon discretionary decisions made by the Federal land management agency, such as special management areas? If so, the land cannot be leased for oil and gas exploration and production. What if the Land Use Plan of the Federal land management agency does not provide for leasing decisions? The land cannot be leased. Assume that each of these questions have been answered in such a way as to continue the leasing process. A few more potential roadblocks exist. There may be conflicts with other land uses currently implemented on the particular tract of land. There could be other State or local governmental regulations that may impede the process. The land may have special emotional or spiritual implications to certain groups of people. If so, those concerns must be factored into the process.

Our weary person is now ready; ready to face more regulatory steps before drilling can commence. A person must go through the nomination process for a particular tract of land before leasing. In the nomination process, a determination must be made as to whether the Resource Management Plan for the Bureau of Land Management (BLM), or the Land Resource Management Plan for the Forest Service provides for oil and gas leasing. If not, a National

Environmental Policy Act (NEPA) analysis must be conducted and the respective land management plan must be revised via a Record of Decision. If the tract of land is available for leasing, the BLM or the Forest Service will conduct a Conformance Review. Upon the successful completion of the Conformance Review, the tract of land will be posted for leasing.

After a tract of land has been posted for leasing, a determination must be made as to whether the tract has been offered for lease competitively in the last 2 years and not been bought. If so, the person may acquire the lease through non-competitive means. If not, the person must acquire the lease at a competitive lease sale. In order to be successful at this stage our person, now called an applicant, must post a bond to assure the government of his faithful compliance with the terms and conditions that may be imposed upon him.

Throughout the process just outlined, before the applicant has sought approval to proceed with the Application for Permit to Drill, there are at least four (4) steps along the path just traveled in which those that oppose the application may pursue legal challenges to prevent the process from going forward: 1. Just prior to the initiation of the nomination process, 2. The performance of a NEPA analysis for the purpose of amending the land management plan, 3. The acquisition of the lease non-competitively, or 4. The application of the lease through a competitive lease sale. If successful, the applicant tenders the bid price to the government and is ready for the next step in the process.

In the event the applicant has successfully made it to the point of seeking an Application for Permit to Drill (APD), the applicant has one of two ways to

seek such permission. One way is to seek a regulatory approval for an APD through the “Notice of Staking” process; the other way is through an APD approval process. While the differences between the two courses may have significant consequences, for the purpose of outlining the regulatory morass involved in the permitting process, the differences are not within the scope of this discussion because the potential for regulatory delays and impediments exist with either course selected. It should be noted that not every regional office of the BLM or the Forest Service provides a choice as to which course to take. For the purposes of this discussion, the “Notice of Staking” process will be examined.

Upon selecting the “Notice of Staking” procedure, the applicant, concurrently to seeking an APD, must obtain drilling permits, licenses, and bonds as necessary from State, county, and local governmental agencies where applicable. Additionally, the applicant must seek the required Federal environmental permits, State and/or local rights-of-way, and zoning permits. Depending on the area, there could be several other permits, licenses, and authorizations required from a host of governmental agencies before the applicant could proceed with the APD process.

The first order of business is the onsite inspection. In preparation for the onsite inspection, the applicant must contact the appropriate surface management agency for potential conflicts and concerns. For instance, an analysis must be made as to whether the resource management plans allow for the number of wells proposed to be drilled on the leased tract. If not, and environmental analysis must be conducted and the resource management plan

amended via a Record of Decision, which could result in a minimum 2 year delay. Assuming there are no conflicts or concerns, or the applicant prevails in any legal challenges, the well location, access road, and potential pipeline routes proposed to be constructed are staked and flagged. At this point, a cultural survey may be conducted.

Assuming the applicant has received the necessary assent to continue, a “Notice of Staking” is filed with the BLM and the surface management agency. Now, the applicant must arrange for the participation of drilling contractors, dozer operators, surface owners, and any other interested persons to participate with the governmental agencies in a pre-drill inspection. At this inspection, the information necessary for the preparation of the Surface Use Program is developed. Of course, the governmental agency has the right to give the applicant additional requirements after the onsite inspection. The governmental agency now determines the need for wildlife and habitat surveys. If needed, the wildlife and habitat surveys must be satisfactorily completed before the applicant can proceed.

From the moment the applicant begins formally seeking approval via the “Notice of Staking” process, there are at least 2 steps along the way for possible legal challenges: 1. The seeking of any other required permits, licenses, or approvals from other Federal, state, or local governmental agencies; and 2. any amendments sought to the resource management plans.

Having navigated the treacherous jungles of bureaucratic thickets, the applicant is now ready to complete the APD. The completion process requires



the preparation of a drilling plan, consisting of a 13 point Surface Use Program and an 8 point Drilling Program, coupled with any specific requirements of governmental field offices. Assuming success is visited upon the applicant once again, he must complete a hydrogen sulfide (H<sub>2</sub>S) contingency plan when applicable; he must complete T&E, cultural, wildlife, botanical, and paleontological reports as applicable; all to the satisfaction of the governmental agency. If any of these reports contained significant adverse findings, the applicant may have to select another location to drill in order to avoid impacting the cultural or historical nature of the site selected, or to avoid impacting the wildlife in the area. If no significant adverse findings are in the reports, the applicant survives to fight yet another round in the regulatory process.

Will a road or pipeline cross BLM land off-lease to access the well site? Will the road or pipeline cross state land to access the well site? Will the road or pipeline cross private land to access the well site? Will the road or pipeline cross Forest Service land to access the well site? If the answer to any of these questions is "yes," then the applicant must seek the appropriate agreements, licenses, or permits in order to proceed.

Is the applicant ready to drill? No. He must seek final APD review and processing, which involves determinations as to the sufficiency of the application itself, the sufficiency of each of the cultural, historical, etc. reports, which must be forwarded to other agencies for review and comment; and plans to correct any significant adverse findings that have surfaced through the process thus far. Depending on the findings, the well site could be eligible for a listing in the

National Register of Historic Places, or the well site might need to be the subject of a mitigation plan that could lead to a decision to not allow drilling at all on the site selected. In which case, another well site must be selected and the process started all over again.

If the governmental agency determines that the proposed action (drilling and production) may affect a listed species on the Endangered Species List, or even a proposed species, or a designated or proposed critical habitat, consultations must be held with the Fish and Wildlife Service, which may require formulations of a Biological Opinion and Incidental Take Statement or a formal Conference Opinion and Report. At this stage, BLM or the Forest Service will determine the need for a site-specific environmental assessment or a project environmental impact statement. Based upon the outcomes of those analyses, the governmental agency develops mitigation measures, which become “Conditions of Approval” attached to the APD if approved. Prior to the development of the “Conditions of Approval,” the governmental agency must make a determination if public involvement is necessary. If so, public comment must be solicited. Thereafter, if the applicant has survived, a final agency decision with “Conditions of Approval” attached is issued with the approved APD. Finally, the applicant can begin drilling. But wait! This final agency decision is subject to legal challenge, and various appeal periods begin.

Throughout the process, the presence of any of the following conditions (which are not exclusive) may delay or prevent a permit from being issued: presence of listed threatened or endangered species; presence of significant

archaeological resources; air quality impacts; visual impacts; noise from oil and gas operations; suburban encroachment on oil and gas activities, state and county government requirements, and protracted NEPA analyses.

If the applicant clears all of the hurdles, traps for the unwary, and successfully avoids the quicksand of bureaucratic morass, drilling begins, but only in the time windows allowed by the permit, which in and of themselves, can make the prospect of actually drilling a well nonexistent. Typical seasonal restrictions on drilling, depending on the area, include: Mule Deer wintering, Elk wintering, Mule Deer fawning, Elk calving, Sage Grouse mating, Raptor mating, Spotted Owl nesting, Burrowing Owl nesting, Big Horn Sheep lambing, Sage Grouse wintering, Mountain Plover nesting, and Southwest Flycatcher nesting. All told, a successful applicant, factoring in the restrictions, could only drill in the months of September and October. Consequently, while technically and legally permissible, drilling becomes practically impossible.

#### CONCLUSION:

A sound natural gas policy should be a cornerstone of any national energy policy. Such a policy should attempt to ensuring reliable supplies at reasonable costs. It should facilitate additional natural gas production and transportation by providing regulatory certainty and adequate incentives for investment incentives for production and infrastructure. It should focus on improving our national security through energy security and should reduce our vulnerability to economic cartels, political conflict and malicious disruption.

A sound natural gas policy should protect our environment by identifying common sense solutions to potential problems. It should increase efficiencies in leasing and permitting and limit systematic exposure to expensive and wasteful frivolous litigation. It should incorporate public lands management practices to balance resource exploration and production with species preservation and other environmental protections.

Such a policy should place a greater emphasis on the “human environment” than our current policy does. Natural gas supply has enormous impact on all of our citizens, our economic health, our national security and posterity.

Finally, a rational natural gas policy, as part of a broader energy policy should attempt to increase the utilization of multiple sources of domestic energy. Nuclear, coal, hydro-electric, hydrogen, geothermal, wind and other renewable sources of energy all have a role to play in our energy supply today and in the future. We need increased supplies of all energy sources in order to meet our current shortage and our growing demand.

#### FINDINGS AND RECOMMENDATIONS:

The Task Force For Affordable Natural Gas has considered every suggestion received over the past two months for solving the natural gas supply/demand imbalance facing our nation. Unfortunately, given the political difficulties Congress faces on many fronts, very-near-term solutions would require more political determination on the part of Congress than can be garnered.

However, the Task Force has identified the following problems with our current natural gas and energy policy and has identified potential solutions to address the problems with the nation's natural gas and energy policy, as reported to us. This list is certainly not exhaustive and should be considered a dynamic work in progress.

Problems:

- Lack of regulatory certainty for natural gas production and transportation on Federal public lands.
- Lack of incentives for the production of natural gas on Federal public lands.
- Lack of ability to identify potential natural gas resources using 21<sup>st</sup> century technology.
- Impediments to production on Federal public lands.

Potential solutions:

- Provide for an inventory of natural gas resources on Federal lands.
- Create Federal office to facilitate and coordinate the permitting and environmental reviews of natural gas projects.
- Create Best Management Practices for the leasing and permitting of natural gas projects on Federal lands.
- Facilitate cooperation between relevant Federal and State agencies and various stakeholders over leasing and permitting of natural gas production and transportation projects.

- Provide for streamline permitting for natural gas projects on Federal lands.
- Ensure timely decisions on lease applications for natural gas production on Federal lands.
- Ensure timely decisions on permitting requests for interstate natural gas pipelines.
- Ensure timely decisions on permit requests for natural gas production on Federal lands.
- Ensure timely processing of environmental reviews for natural gas production on Federal lands.
- Provide incentives for production of natural gas on marginal properties during periods of low commodity prices.
- Provide royalty incentives for production of deep and ultra deep natural gas in shallow waters on the Outer Continental Shelf.